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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/578,217	05/23/2000	Li-Huan Jen	9826-014-999	4631

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EXAMINER	
PSITOS, ARISTOTELIS M	
ART UNIT	**PAPER NUMBER**
2653	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/578,217	JEN, LI-HUAN	
	Examiner	Art Unit	
	Aristotelis M Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8,10-16,18,19 and 21-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *all* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicant's response of 4/23/04 has been considered with the following results.

Claim Objections

Claims 3 and 13 are objected to because of the following informalities: The following problems exist:

With respect to claims 3 and 13, the examiner cannot readily find clear support in the remainder of the specification for this claim language. Appropriate correction is required.

Claims 11, 21-24 and 27-29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

In particular, the following problems exits:

a) with respect to claims 11 and 29 describe a function, however, it is not clear which means/element in the parent claim this is attempting to further define.

b) with respect to claims 21-24 and 27-29 these are drawn to method limitations, i.e., selection for the remedial action and not to any apparatus for performing such. Since these claims depend from apparatus parent claims and add no further elements/means for, they fail accordingly.

c) with respect to claims 22, 24 and 28 they refer to "a system optimization routine"; however, it isn't clear which routine this is, or how such optimization is performed. Further explanation is respectfully requested. Absent an appropriate response the examiner will introduce an insufficient disclosure rejection in any further communication.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims ~~1-29~~ 1-6, 8, 10-16, 18, 19, 21-29 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The means/step of "demultiplexing a steam of error flag signals" is critical or essential to the

practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Applicants' have presented arguments on page 10 of his above dated response indicating that such is not found in any of the previously cited prior art. Such is not claimed in any of the independent claims.

Since none of the dependent claims further defines/presents such they fall as well.

2. Claims 1,3-7,10-22,25-29 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The ability of having the clock counter as described in the specification with respect to the operation of figures 5 & 6 is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). This element is found/claimed in claim 2 and the examiner recommends inserting/including that subject matter in the appropriate independent claims. Furthermore, when such an element is included in independent claims 1 and 18, they are then identical with claim 8 and upon allowance of any independent claims; cancellation of duplicate claims will be required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-6, 8,10-16,18,19,21-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, as now amended, the comparator requires threshold ability. However, no element (as was previous found/recited in claims 7 and 20 for instance) is provided for (claimed) and hence the desired functional ability of the comparator does not follow. The examiner recommends inserting the threshold rate register.

Double Patenting

4. Claims 1-6,8,10-16,18,19,21-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6738943 in view of Shimawaki et al. Applicants' prior patent as found in claim 5 for instance lacks the additional ability with respect to the "average error rate". The present claims focuses upon figures 6 and 7, whereas applicants' prior patent focuses upon figures 3 & 4.

The ability to col. 6 lines 22 plus which teaches the ability of performing/measuring an average error rate.

The present independent claims follow the claim format found in either independent claims 1 and 9 (apparatus), claim 14 (method) in the above noted patent. Further limitations with respect to the comparator are found in claim 5 of the above noted patent.

The ability with respect to measuring/evaluating the "average error rate" although disclosed is not claimed. Nevertheless such is taught by the reference to Shimawaki et al.

The remaining dependent claim limitations are met by the claims present in the above noted patent.

Alternatively, claims 1-29 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6738943. Although the conflicting claims are not identical, they are not patentably distinct from each other because the above noted claims in the patent covers the above claimed "averaging" ability. That is the patented claims describe the inventions found in both figures 3 & 5 and figures 6 & 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-6,8,10-16,18 and 19 are rejected under 35 U.S.C. 103 (a) as obvious over Satoh et al further considered with Ichikawa et al and both further considered with Shimawaki et al/LoGalbo et al.

Satoh et al provides for the deinterleave ability, which the examiner interprets as the claimed demux. prior to his error flag decoding – see the description of the operation of elements 20 plus. There is no specific disclosure with respect to an "average error rate" as embodied with a comparator.

Ichikawa et al discloses in a data signal-processing environment the reception of information, detecting various occurrences as well as subsequently processing such events. Applicant's attention is drawn to figures 1 and 2 for instance as well as col. line 28 to col. 2 line 64 for instance. The examiner interprets the above as meeting the first two claimed steps of claim 10.

The examiner interprets the disclosure commencing at col. 9 line 40 through col. 12 line 50 as providing for the counting and storing steps of claim 10. Hence the limitations of claim 10 are met under 102 requirements.

This is not particular to an "average" error rate.

Shimawaki et al discloses the ability in this environment for measuring average error rates.

Alternatively, the ability in this environment to count either the number or errors, or an average thereof, and hence generate an average "error" rate is taught in the LoGalbo et al reference – see the discussion at col. 4 lines 1-13.

It would have been obvious to modify the base system of Satoh et al with the above noted teachings from Ichikawa et al and Shimawaki et al/LoGalbo et al, motivation is to provide for not only a detection of error, but also a detection of "average" error rate and appropriate subsequent actions to correct/minimize such. This greatly improves the dynamics of the Satoh et al system.

With respect to the limitations of claims:

a) 11 – the examiner concludes the amount of predetermined time is as recited because the correction is performed in real time.

b) 12-16 – see the above noted passage at col. 2 lines 38 + which reference appropriate error types.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

6. Claims 21-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 1, 8, 10 and 18 above, and further in view of Shimawaki et al and Official notice.

The claims are dependent upon their respective parent claims 1, 8, 10 and 18 but recite similar limitations.

The ability of controlling a speed by ways of a servo feedback loop are considered well known and Official notice is taken thereof.

Because Shimawaki et al is a comparison of test sync. pattern, the ability of subsequently choosing an aspect of a servo feedback control focusing upon the reducing of rotating speed is considered merely a selection between feedback control subsystems.

It would have been obvious to modify the base system as discussed above in paragraph 5 with such alternative servo feedback control loops, motivation is to incorporate a plurality of alternative/low impact solutions along with high impact (signal processing) solutions and hence save time by attempting to solve system problems in a graduated response including low impact solutions.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 10-05003 – which teaches the interruption of system operations in a recoding device if the appropriate number of error flag pulses and averaging thereof is used in the comparator circuitry. Shoji et al – also

teaches in the optical recording art the detection of "error" as upon appropriate thresholds being surpassed, appropriate actions are taken.

Braun and Stephenson et al also are illustrative of average error rates and demux and subsequent error correction systems respectively.

Hard copies of the application files are now separated from this examining corps; hence the examiner can answer no questions that require a review of the file without sufficient lead-time.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning *the merits* of this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653

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